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ABSTRACT

A model is presented to help clarify the concept of lifelong learning. Constructed on the idea that an operational definition of lifelong learning should be based on the locus of control for making decisions about the goals and means of learning, the model is a two-by-two matrix of learner and institution that represents four identified situations of learning: formal (learners have little control over the objectives or means of learning); nonformal (learners control the objectives but not the means of learning); informal (learners control the means but not the objectives of learning); and self-directed (learners control both the objectives and means of learning). The model is interpreted as demonstrating how all planned or deliberate learning is located along a continuum; the concept of control provides the basis for classifying the various types of lifelong learning. From the model the authors also suggest that lifelong learning is neither the domain of a particular age group nor a single program or piece of legislation; it is a composite of many programs, pieces of legislation, and learner-initiated activities. To further clarify the model, expansions (based on research) of formal, nonformal, and informal learning are provided. Then, using the established model, an in-depth examination is made of the ultimate state of learner autonomy: self-directed learning. Included in the discussion is a review of previous research and a look at current research and trends. A list of references concludes the paper. (CT)

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LIFELONG LEARNING: FORMAL, NONFORMAL, INFORMAL, AND SELF-DIRECTED

INFORMATION SERIES NO. 241

Donald W. Mocker

and

George E. Spear
Center for Resource Development in Adult Education
University of Missouri-Kansas City

The ERIC Clearinghouse on Adult, Career, and Vocational Education
The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
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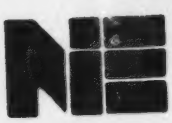

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FOREWORD

The Educational Resources Information Center Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) is one of sixteen clearinghouses in a nationwide information system that is funded by the National Institute of Education. One of the functions of the Clearinghouse is to interpret the literature that is entered into the ERIC database. This paper should be of particular interest to adult education practitioners, researchers, decision-makers, and graduate students.

The profession is indebted to Donald W. Mocker, and George E. Spear of the Center for Resource Development in Adult Education, the School of Education, the University of Missouri-Kansas City for their scholarship in the preparation of this paper. Dr. Mocker is a Professor, currently teaching graduate courses in adult education and curriculum, and codirector of the Center for Resource Development in Adult Education. His background includes classroom teaching, directing a local adult basic education program, and training teachers. Dr. Spear, Professor, is codirector of the Center for Resource Development in Adult Education. He is currently teaching adult education graduate courses and his major research interest is in self-directed learning.

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Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

PREFACE

The concept of lifelong learning has become one of the most widely discussed concepts in the field of adult education. In the United States and Canada, journals have adopted the label, state departments of education have been renamed, and legislation has been passed to ensure its growth. Through the efforts of organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Institute for International Studies at Michigan State University, the concept has been carried to every free country in the world and some that are not so free.

However, with all of this activity and interest, there is still no agreement on a definition of the basic concept of lifelong learning and no consensus on the elements that make up the concept. Perhaps the most discouraging fact of all is that many adult educators are satisfied with "doing a better job of it" rather than "understanding it." Bowers and Fisher (1972) have referred to this definitional problem as the "semantic jungle." What is lifelong learning? Is it the same as lifelong education? Because lifelong learning has not been clearly defined, its relationship to other concepts such as self-directed learning, informal learning, nonformal learning, and formal learning is also unclear. These questions and issues remain unanswered. This monograph is a response to that confusion. It is obviously not the final answer, but is possibly a step forward that will lead to further clarity.

One additional point. To the researcher, the need for clarity and precision of terms does not need to be justified. But to practitioners who feel this kind of an exercise is a "toy of the academic," a brief explanation is offered. The importance of a theory base to any field that wants to progress from voodooism to an academic discipline is beyond question. An examination of the field of medicine prior to the development of an acceptance of the germ theory should be sufficient evidence of this point. The beginning step in a theory-building process is to define the major elements of a phenomenon and then define the relationship between and among those elements.

This monograph has three objectives: first, to provide a model that will help clarify the concept of lifelong learning; second, to identify and define the major elements of that concept; and third, using the established model, to take an in-depth look at the research of one type of lifelong learning, namely self-directed learning.

EXECUTIVE SUMMARY

A model is presented to help clarify the concept of lifelong learning. Constructed on the idea that an operational definition of lifelong learning should be based on the locus of control for making decisions about the goals and means of learning, the model is a two-by-two matrix of learner and institution that represents four identified situations of learning: formal (learners have little control over the objectives or means of learning); nonformal (learners control the objectives but not the means of learning); informal (learners control the means but not the objectives of learning); and self-directed (learners control both the objectives and means of learning). The model is interpreted as demonstrating how all planned or deliberate learning is located along a continuum; and the concept of control provides the basis for classifying the various types of lifelong learning. From the model the authors also suggest that lifelong learning is neither the domain of a particular age group nor a single program or piece of legislation; it is a composite of many programs, pieces of legislation, and learner-initiated activities. To further clarify the model, expansions (based on research) of formal, nonformal, and informal learning are provided. Then, using the established model, an in-depth examination is made of the ultimate state of learner autonomy: self-directed learning. Included in the discussion is a review of previous research and a look at current research and trends. A list of references concludes the paper.

Literature relating to the topic of lifelong, formal, nonformal, informal, and self-directed learning can be found in the ERIC system under the following descriptors: *Lifelong Learning; *Educational Research; *Nonformal Education; State of the Art Reviews; *Adult Learning; Independent Study; *Models; Definitions. Asterisks indicate descriptors having particular relevance.

INTRODUCTION

Introduction to Lifelong Learning

The term lifelong learning is not new. It has been around for a long time and has been defined in many different ways. Some writers such as Newsom (1977) take a narrow view of lifelong learning by equating it with self-directed learning. Other writers (Dadswell 1978; Dave 1976) take a broad view of lifelong learning by thinking of it as more of a philosophy than as a specific type of learning such as self-directed. To further confuse the definitional problem, still other writers equate lifelong *learning* with lifelong *education*. The present writers agree with those who define lifelong learning in a broad sense.

Before offering a classification system for lifelong learning, it might first be helpful to analyze the concept to determine some of its basic characteristics. Because the process continues throughout one's life, it cannot be identified with any specific age group. Therefore, we must identify it with all groups. This leads to a second characteristic. As it is not associated with a single age group, it cannot be defined in terms of a single program. Instead, it must be defined as many programs that are pursued during a lifetime. Some writers have suggested a third characteristic that is even broader than the system idea. Faure et al. (1972) stated that "lifelong education is not an educational system but the principle on which the overall organization of a system is founded, and which should accordingly underlie the development of each of its component parts." Dadswell (1978) made the same point when he said, "Lifelong learning tends to be more of a philosophy. A philosophy which acts as a screen and an organizing principle for all learning."

The authors are suggesting that an operational definition of the concept of lifelong learning should be based on the locus of control for making decisions regarding the goals and means of learning. Many, perhaps most, adult educators and psychologists agree that one of the distinctive characteristics of adulthood is the willingness of individuals to assume responsibility for decisions that affect their lives. To shed the ties of dependence and move to independence, a person must have learned the skills of independent study and be willing to use them. Brookfield (1980) and Knowles (1971) are but two of the many adult educators who made this point.

If control is a key characteristic of adulthood, then one way of conceptualizing lifelong learning is to use the idea of control as the basis of classifying the various types of lifelong learning. Using this rationale, all planned or deliberate learning can be located on a continuum. At one end is the type of learning over which the individual has virtually no control, and at the other end is the type of learning for which the learner has almost total control.

One additional point must now be discussed. If control over one's learning is the key organizing principle, then what are the dimensions of that decision-making process? In considering this question, there are two major decisions that a learner can make about any learning episode. The first is identifying *what* should be learned. In formal learning, this is most commonly referred to as the objectives or curriculum. The second decision is identifying *how* to learn. In formal schooling, this is referred to as the plan of instruction. In self-directed learning, it is referred to by some as the resources for learning.

When the authors refer to making decisions for what is to be learned and how it is to be learned, they are referring to decisions made at a technical or learner level. For instance, individuals may decide, on their own, to learn how to lose weight and may further decide to go to the library and find some books on the subject. These decisions were made without a physician's advice or at the insistence of a mate or friend. These are technical decisions that the learner can control.

Model of Lifelong Learning

Learner I - "My advisor said I had to take this course to graduate."

Learner II - "I need to learn about these new drugs, so I think I will attend that workshop."

Learner III - "The certification board said I need to become competent in that area. Judy can teach me how to do that."

Learner IV - "I've always wanted to learn how to keep good financial records. I bet I can learn that from my son's accounting books."

These four statements are typical expressions of a person's decision to learn. Together they represent the fundamental types of lifelong learning.

The authors see lifelong learning as a system that is composed of four generic types of learning. Learner I illustrates the first type of lifelong learning: *formal* learning. The obvious examples of this type of learning are found in most elementary and secondary schools, many forms of college and university degree programs, and military training. In these examples the technical decisions on the *what* and *how* are not made by the learner; thus he or she has little control over the process.

In the next example, a person wants to learn about drugs and decides to attend an organized workshop. This is an example of the second type of lifelong learning: *nonformal* learning. Here the individual decides *what* is to be learned, but the *how* is decided by the workshop organizer. In nonformal learning the individual has partial control over the method of learning. Another example of this type is the farmer who goes to the extension agent because he or she wants to learn about new varieties of seed corn. The extension agent might respond by giving the farmer several bulletins to read. A week later, the agent might take the farmer to a demonstration plot where the new variety has been planted. The agent might then conclude this learning activity by sending the farmer comparison production figures at the end of harvest. In this example, the farmer decided the *what* and the extension agent decided the *how*.

The third type of lifelong learning is *informal* learning. In this type of learning an individual other than the learner decides *what* is to be learned while the learner decides *how* it is to be learned. Like nonformal learning, the individual has partial control in the decision-making process. In the example of Learner III, the certification board decided what competencies were to be learned and the learner decided *how*. Here the learner chose her friend Judy as an instructor. She could also have decided to attend a seminar or learn the competencies by trial and error. Here, the *how* or means of instruction is controlled by the learner.

The fourth and final type of lifelong learning is self-directed. According to Tough (1971) this is the learning method of most adults. As the name suggests, the individual makes all decisions regarding the *what* and *how* of learning. The statement from Learner IV is typical of this type. In self-directed learning the individual has almost total control over the learning process.

The concept of learner control has intrigued and attracted educators from a broad range of disciplines and professions, particularly over the past fifteen years. In North America, the term self-directed has been used to describe the broad range and various degrees of responsibility assumed by or assigned to learners as they engage in a learning activity or process. Other terms (including self-planned, self-teaching, independent, informal, personalized, individualized, and contract learning) occur in the literature; however, it may be suspected that the term self-directed, with its suggestion of control and its functional implications, is the most appealing one to both educators and learners.

Essentially, research interests pertaining to self-directed learning as defined in the literature focus on four general areas or topics:

1. Self-directed learning as an instructional mode or technique
2. Activities and perceptions of self-directed learners
3. Individual traits and skills that facilitate self-directed learning
4. The potential and means for increasing individuals' abilities in self-directed learning (learning how to learn)

This first area, instructional mode or technique, has attracted the greatest interest of educators from disciplines and fields outside adult education. However, such research has been directed primarily to peers or colleagues within these outside disciplines. It is recognized that the works of Carl Rogers, Jerome Bruner, and others encouraged movement toward greater student autonomy and freedom in elementary and secondary schools in the 1960s. At the same time, the theories of Kenneth Bennis, Abraham Maslow, and Kurt Lewin gave impetus to experimentation in assigning increased responsibility to learners in a number of disciplines and professional fields beyond the traditional elementary and secondary schools. Although much of this research has been termed "self-directed" by its originators, in this paper it is discussed as *informal learning*, which more accurately identifies its characteristics as defined in this paper.

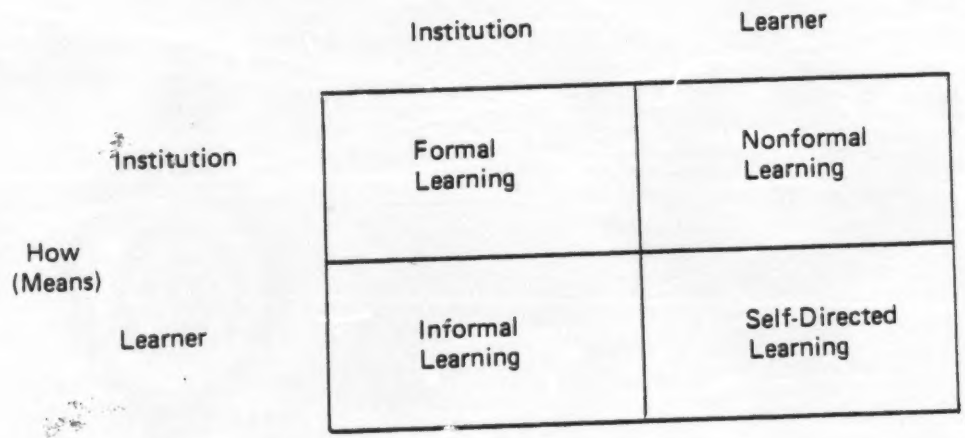
During the same period, the interest of adult educators in self-directed learning was generated by the findings of Johnstone and Rivera (1965), Houle (1961), and Tough (1968, 1971). These studies, different from the works of the instructional theorists, focused instead upon the learners themselves, and sought to understand better the self-directed learning process instead of its potential application.

The research areas previously designated as two, three, and four are most exclusively the domain of researchers who are identified with the academic field of adult education. All three areas fall clearly within the self-directed learning category and are discussed in the final chapter as follows: Area 2—Previous Reviews of Research; Area 3—Characteristics that Facilitate Self-Directed Learning; and Area 4—Improving Skills for Self-Directed Learning.

The volume of literature identified as dealing with self-directed learning has grown steadily over the past decade but unfortunately, the dichotomies persist. Adult educators are still most concerned with the learner and the phenomenon of learning while the formal educationists are preoccupied with instructional applications.

With this brief introduction of the lifelong learning model, it may be helpful to summarize some of the characteristics that have emerged. Lifelong learning is not the domain of a particular age group. It is, therefore, a composite of many programs. Second, it is not a piece of legislation.

Legislation is related to lifelong learning in that it may help to promote a particular segment of the process, but legislation in and of itself is not and cannot be synonymous with lifelong learning. Lifelong learning is comprised of many programs, many pieces of legislation, and many learner-initiated activities. Using control over the objectives and means of learning as the major dimensions of lifelong learning, a two-by-two matrix can be used to illustrate the model.



Formal Learning – learners have no control over the objectives or means of their learning.

Nonformal Learning – learners control the objectives but not the means.

Informal Learning – learners control the means but not the objectives.

Self-Directed Learning – learners control both the objectives and the means.

Figure 1. Lifelong learning model

Of the four types of lifelong learning described in the model, one researcher, Dave (1976), has identified three: formal, nonformal, and informal. However, although he includes many forms and stages of learning in his concept of lifelong learning, he does not mention self-directed, nor has he developed a system for classifying forms of learning. To further clarify the lifelong learning model shown in figure 1, an expansion of each subtype follows.

FORMAL, NONFORMAL, AND INFORMAL LEARNING

Formal Learning

This type of learning is most closely associated with elementary and secondary education and most degree and certificate programs offered by colleges and universities. Other educational programs from cosmetology to the military also fall into this category. As previously stated, the learner has little responsibility in this form of learning.

Even programs such as "free schools" and "open universities" can be classified as formal because all major decisions are made by people other than the learner. It may appear that the learner is given responsibility for some of the major decisions, but upon closer examination it is revealed that the learner is actually making decisions from prescribed alternatives. The alternatives have been determined by another person.

Formal learning is far more complex than the classification system might indicate. In fact, the matrix would probably be more accurate if conceived as a cube to indicate its complexity. That job of explication, however, will be left to those who choose to ponder its dimensions more at length.

Formal learning is not relegated to one specific age group. Formal learning can have either traditional or nontraditional objectives. An example of traditional objectives would be the "3 Rs" of elementary education, or the math skills an adult needs to pass the General Educational Development (GED) Examination. Nontraditional objectives might be found in extracurricular courses taught after school hours. These are nontraditional because they are not part of the graduation requirements.

As with the objectives of learning, the means or *how* of learning can also be programmed at traditional or nontraditional levels. One element of the means is the learning setting. A traditional setting is any place in which education is the primary or sole function. High school buildings, college classrooms, and trade schools are obvious examples of traditional settings. Another element of the means is the general approach to instruction. Group or classroom instruction is an example of a traditional approach. On the other hand, nontraditional settings, or alternate learning environments, are any places where the primary function or use is not educational. The back room of a bank, a store front, or rooms in an office building that are used after hours for classes are all examples of nontraditional settings. Nontraditional learning approaches might be prepared kits that the learner could take home or a course by correspondence.

A course with traditional objectives that is offered in a traditional setting (e.g., a high school algebra course) seems to be basically different from a course with nontraditional objectives that is offered in a nontraditional setting (e.g., a macrame course that is part of an after-hours program at a local manufacturing plant). However, within the framework here, the common characteristic that requires both types to be classified as formal learning is that the decisions regarding the objectives (what is to be learned) and the means (how is it to be learned) are made by someone other than the learner.

Using this classification system, we are now ready to analyze the consistency of some reports and research. In 1975 a report of the 28th All India Adult Education Conference was published under the title "Reports of Sub-Groups." The theme of the conference was "Non-Formal Education" and had the following subcommittee reports: dropouts, programs for youth fifteen to twenty-five, programs for women, programs for farmers, programs for industrial workers, and financing. Using the authors' system, this would have been classified as formal because they were discussing programs with traditional and nontraditional objectives that were being offered in nontraditional settings. Nowhere in the report was there any indication that learners had responsibility for making any of the major decisions.

Another example is the report "Recent Steps Towards Non-Formal Education of Adults in the Philippines," (1977) that focused on this country's "school-on-the-air" program. This particular program is part of what the Filipinos refer to as nonformal learning. Here again the learner was given no responsibility for decisions over either the objectives or the means of the learning. In this example, all decisions were made by the federal administration and local organizing groups. This is an example of traditional objectives being offered in nontraditional settings. The nontraditional setting is the home rather than a regular classroom, and the radio is a nontraditional instructional technique.

Another example of confusion over nontraditional approaches to formal education and nonformal learning was Akinpelu's (1980) report on the new educational policy of Nigeria. In this report, he equated adult and nonformal education and then went on to define them as education that consists of "functional literacy, remedial, continuing, vocational, aesthetic, cultural, and civic education for youths and adults outside the formal school system." All the participants of the conference that produced this report had read *Learning To Be* by Faure et al. (1972) and as the aforementioned definition would indicate, were strongly influenced by Faure et al.'s writing. This article may hold one of the answers to the definitional problem. Both the government of Nigeria and the researcher, Akinpelu, refer to nonformal *education* rather than nonformal *learning*. (The writers point out that this lack of clarity occurs frequently, and this case is used only as an example to make the point.) The use of the term "education" carries an institutional or system connotation, whereas the term "learning" connotes behavior of the individual. Learning seems to focus on the person while education focuses on the system.

Nonformal Learning

In this type of lifelong learning, the individual has some responsibility in the decision-making process. Learners make decisions on *what* is to be learned, but seek help on the *how* or means of the learning activity.

Harley Reyburn has heard that reading at 500 words per minute is a very acceptable and achievable level. He is not sure how fast he is reading, but knows it is below 500 words per minute. He decides to enroll at a local community college for a reading improvement course.

Sarah Fasken is unhappy in her present job and wants to develop new skills so she can become a bookkeeper and run a small business out of her home. She finds out that the local vocational school offers a one-year certificate program in accounting. After visiting with the admissions officers, she decides to enroll in the program.

In these examples, both Harley and Sarah decided specifically what they wanted to learn (speed reading and bookkeeping) but did not know how to learn it on their own. That decision, the means or how, was decided by some individual other than the learner.

Examples of research and programs related to this definition of nonformal learning in North American literature are limited. This might be anticipated, as such activities require some institutional involvement, and institutions are most likely to impose or retain control over goals, even while permitting learners the freedom for selecting means.

While the research in North America is limited, research in nonformal learning in the rest of the world is almost nonexistent. The label nonformal learning is in use in developing countries, in Asia, and in much of Europe to cover all out-of-school learning. The tag nonformal learning is thus used as a generic term that has no specific meaning. Most reports of nonformal learning in countries other than North America are reports of programs which have some government affiliation. Again, it might be anticipated that government agencies would maintain control over program goals and for a program to be classified as nonformal the learner must control the goals of learning. A second explanation might be that both UNESCO and the Institute for International Studies use the term nonformal to refer to out-of-school programs, and both of these institutions have profound effects on the thinking of educators in non-North American countries.

Kinsey and Bing (1978) reported on nonformal education in Ghana; Sheffield and Diejomaoh (1972) surveyed nonformal education in Africa; and Nathalang et al. (1974) reported on nonformal learning in Southeast Asia. In each case the term was used generically to refer to any out-of-school learning. None of these programs involved the learner in the decision-making process.

However, some nonformal research is being conducted in England. Fordham, Paulton, and Randle (1975) reported on an ongoing action-research project in a large housing estate in southern England. The objective of the study was to develop new strategies for community involvement that would increase working class participation in adult education. The goals for the educational program originated from the initial responses of the local people to the research team's inquiries.

In North America some examples of nonformal learning, as related to the definition used in this paper, were found. Levchuk (1977) studied the continuing education activities of rural pharmacists, who were given resource materials but were expected to establish their own professional objectives and engage in self-evaluation. His results indicated the learners favored more supervisory involvement in directing the activities.

Larson (1978) studied a workshop for parents of young children that contained a nonformal option within the formal program. A variety of material packets, keyed to the assessed needs of the parents, were prepared and the parents could opt for group activities or choose to work with materials independently according to their own needs or interests. By allowing learners to decide between sets of materials the learners had control over the *what* or goals of their learning. The group that chose to study on their own began with only sixteen parents and ended with eleven. Parents tended to stay with formal activities rather than choosing the nonformal mode. Spear and Mocker (1981) found the same results in a national study of adult learners with less than a high school education. Although these studies are limited, they may suggest a specific role for the adult educator in the lifelong learning process.

As interest in the autonomous or self-directed learner has grown in recent years, adult educators have frequently suggested that an appropriate task for themselves is the development of resource materials to be ready when the learner's needs arise. This seems reasonable, but with a note of caution related to economy. The costs in time, money, and personnel suggest that the need for study materials should be broadly based and directed toward serving a population of sufficient size to warrant the expenditures.

The Cooperative Extension Service has a history of preparing simple guideline sheets and pamphlets on a myriad of topics on the farm, garden, lawn, home, and family. These are universal topics with continuing demand and the preparation of the materials is underwritten by federal, state, and local government funds. For content, the system draws heavily on state land-grant university research, much of which is federally subsidized.

Related to Cooperative Extension Service efforts, but with a different focus, was the College Entrance Examination Board project (Mavor, Toro, and DeProspo 1976) which sought to identify and organize services specifically to assist the independent learner beyond the level sought by the casual patron. Ten libraries across the country participated. In 1975-76, 934 learners were surveyed and provided suggestions for conditions, organizations, and policies for implementing a new service concept.

While the Extension Service is committed to the preparation of new materials, libraries, with extensive resource materials, focus on developing comprehensive assistance programs that view the patron as a learner rather than merely a reader. Although this paper largely ignores the literature on libraries, they have historically been the largest providers of materials for nonformal learners. The Cooperative Extension Service also serves broad populations and has resources to meet a wide variety of needs. It would seem that such institutions are best suited to provide the materials needed by nonformal learners. At the same time, opportunities for individual adult educators or small organizations, equipped to serve specific populations with highly specialized needs, are still there but seem limited.

Informal Learning

Within the definitional framework of this review, much, and perhaps most, of the literature from North America dealing with instruction describes *informal* rather than *self-directed* learning. With few exceptions, the research reports activities in which an institution maintains control of the goals of the learning activity while permitting or assigning a degree of responsibility for the means for achieving those goals to the learners.

A selected sample of doctoral dissertations in which the term self-directed appears in the title serves as examples. Brown (1966), Johnson (1973), Reel (1973), and Schleider (1977) investigated the effects of giving elementary and secondary school students responsibility for achieving established learning objectives. In all cases, researchers found that achievement level equaled or exceeded levels realized or expected of students taught in a conventional manner. Himmel (1970) reviewed thirty studies dealing with teaching undergraduate psychology courses that "retained the essence of the course while allowing students more freedom and responsibility for content and time structuring." Using achievement as the criterion, he found the approach to be of no disadvantage and that the informal approach was perceived as most favorable in one-third of the studies, while no preference was expressed for the lecture method. Brodrick (1974) studied achievement in and attitudes toward English of community college students, and Marietta (1975) studied graduate students in educational administration. Kratz (1980) sought implications of the informal approach for retaining adult basic education students in New York. All produced essentially indifferent results in linking learning proficiency with greater learner autonomy.

Given achievement as the criterion, then, there appears to be no strong case for encouraging learner responsibility through an informal mode of instruction within an institution-based program. At the same time, the evidence does not suggest that increasing learners' freedom diminishes their proficiency levels in the content areas.

More persuasive reasons for installing the informal approach are instructor preference, learner preference, and the larger philosophical belief that the individual develops beneficial competencies through the exercise of autonomy and freedom. This latter belief, while not demonstrated conclusively, is widely held and is the most frequent justification for using the informal instructional approach; that is, an approach that places responsibility of deciding the means on the learner.

One caution should be noted in categorizing an activity as informal within this matrix. It is occasionally troublesome to distinguish the difference between informal learning and nontraditional methods used in the formal mode. As an example, Reinhart (1976) studied two groups of hospital nurses involved in an inservice program on crisis intervention. One group received class instruction while members of the other group studied the material on their own. Both the experimental and control groups used the same printed materials and a pretest/posttest revealed no significant difference in group performance.

The point is that while one group studied on its own (an implied freedom), the institution maintained control of the means as well as the goals by prescribing the materials (means). Witnin this framework, then, this was a formal learning activity that used two different instructional techniques. In essence this is no different from the familiar traditional classroom practice wherein the instructor may choose to lecture or make a reading assignment of a specific body of material.

What is demonstrated by this example is the potential for a researcher to be misled by nontraditional settings and content and to see or declare the presence of learner freedoms when, in fact, few or none exist.

SELF-DIRECTED LEARNING

Introduction

Self-directed learning, as defined here, represents the ultimate state of learner autonomy, i.e., the learner exercises control over and major responsibility for choosing both the goals and the means of the learning. Tough (1971) and Cross (1981) place approximately 70 percent of all adult learning projects in this category. Broadly, the definition suggests that the learner decides what and how to learn, but that other decisions, such as when and where to learn and how much to learn at any given time are implicit. The learner not only selects but may also reject, add, or change resources at will, decide to continue or terminate the project, and finally determine the satisfaction or adequacy of the outcomes.

While the mode itself is well defined and generally accepted, the problem with terminology persists. Tough (1971) identified this as self-planned learning, but also has described it as self-teaching. In 1977 Penland followed the use of the term self-planned, but then switched to self-initiated in 1979, and to self-directed in 1981. Brookfield (1980), deploring the "plethora of definitions. . .individualized learning, self-teaching, autonomous learning, autodidactic activity, isolated learning," settled for the term independent adult learning. Cross (1981) joined the growing trend in calling it self-directed learning, the term that is used here and that seems most likely to dominate in the future.

As stated, self-directed learning as a phenomenon is not new, but the study of that phenomenon has only recently come to the fore. Interest in the adult learner as a participant in organized activities has dominated research in the field over time, and concerns for self-directed learning represent a significant departure for adult educators. Interestingly, most reviewers trace the roots of curiosity about self-directed learning to the most comprehensive participation study of adult learners ever conducted, *Volunteers for Learning* (Johnstone and Rivera 1965). While not directly concerned with self-directed learning in their own survey, those authors detected it in such quantity that they suggested it was the most neglected area of adult learning research.

It remained for Allen Tough of the Ontario Institute for Studies in Education to give impetus to research on self-directed learning with his seminal book, *The Adult's Learning Projects: A Fresh Approach to Theory and Practice in Adult Learning* (1971). Tough set the parameters of the areas of study with this definition—

> A learning project—the central focus of this book—is here defined as a series of related episodes, adding up to at least seven hours. In each episode, more than half of the person's total motivation is to gain and retain certain fairly clear knowledge and skills, or to produce some other lasting change in himself. (Tough 1971, p. 6)

He included in his study learning episodes that were planned by the learner, those planned by nonhuman resources, one-to-one consultation (or tutor), and group or class activities conducted by a leader. Self-planned projects, those defined as self-directed in the matrix discussed earlier, comprised 68 percent of the total projects studied.

The authors note here that Tough and his replicators have investigated the range of adult learning and in doing so address several of the definitional cells in the matrix. Tough's group planner, in assuming a leader or instructor role, falls under this definition of formal or nonformal learning. Nonhuman planners, which control the means for learning, are within the nonformal category, while one-to-one planners may be either formal, nonformal, or informal, depending on their function and relationship to the learner's project. Acknowledging these categorizations, the decision was made to present the research inspired by Tough under the term self-directed because of the dominance of self-planned learning in those investigations, and the subsequent centering of interest on that mode.

Within five years of the release of his book, Tough's work had sparked not less than twenty-five dissertations, theses, and independent research studies. These and numerous subsequent studies used Tough's interview approach and modifications of his interview schedule to broaden the description of the self-directed learner and the learning process, while confirming and refining the findings in Tough's original work.

Previous Reviews of Research

The specific results of these numerous research efforts have been reviewed and summarized at least three times in recent years (Coolican 1974; Tough 1978; Cross 1981). To reduce the redundancy of this widely disseminated information, only those three summaries will be reviewed here. The reader is referred to the summaries or the original documents if more specific knowledge is required.

Coolican 1974

Patricia M. Coolican (1974) identified seven research studies, including her own dissertation, that used the Tough approach. She compared their findings and suggested policy implications for institutions and for the field of adult education. She included Tough's original study (1971); her own dissertation (1973); McCatty's study of Canadian professional men (1973); Johns' report on practicing pharmacists in Georgia (1973); Denys' work on African professionals (1973); Johnson's study of adult high school and GED graduates (1973); and Peters and Gordon's research on rural and urban populations in Tennessee (1974).

All the studies showed universal participation by the adult subjects in some type of learning project during any twelve-month period. Populations varied considerably in the extent of activities, ranging from three in the Peters and Gordon study to thirteen in Johnson's. Hours devoted to learning averaged 167 in Coolican's study of young mothers to 1,244 by McCatty's average professional man. The several studies erased doubts about the extent of participation that had been raised by Tough's book, and opened the path for new research questions to be pursued.

A second and surprising issue raised by Tough had to do with the virtual insignificance of learning for credentials or credit reported by adult learners. With a single exception, the studies confirmed credit as a minor reason for learning. Only Johnson's population of recent high school graduates, who were now engaged in vocational or job advancement training and community college programs, differed when reporting that 23 percent of their projects were taken for credit.

Given so small a percentage of learning for credit, Coolican asked, "How should adult education be organized—around institutions, credit, and credentials or around learners?"

Self-planned projects were dominant in all the studies, with figures ranging from a low of 56 percent among Johns' pharmacists to the high incidence of 76 percent for the professionals in McCatty's study. The pharmacists reported the only significant use of nonhuman planners: a use that was interpreted as resulting from the ready availability of continuing professional education cassettes in the area.

Tough had suggested that use of the knowledge or skill motivated most learners. Although he did not rank the content learned, the subsequent studies confirmed that subject matter—related to the practical considerations of job, home, family, hobbies, and recreation—inspired most learning efforts while varying with the respective populations. Public affairs, religion, and general education fell to a minor status on the list.

People turn to other people most frequently for assistance in learning—first to friends and relatives and then to paid experts. Books and pamphlets rival paid experts as resources, and classes are a distant fourth. Practice, reading, and discussion were the methods for learning most frequently reported.

Noting that interviewees uniformly lacked a concept of lifelong learning, Coolican suggested the formal educational system should produce learners capable of initiating and directing their own learning and able to help others learn.

Adult educators should help adults increase their competencies for self-directed learning by learning how to determine their educational needs, organizing learning experiences, and evaluating the outcomes. She saw adult education institutions becoming coordination, resource, and referral bases.

Believing that self-directed learning should not be outside the responsibility of adult education, Coolican posed two major and still unanswered questions: "What are the grounds for intervention, and if the adult educator intervenes in the domain of self-directed learning, what does he influence and how?"

Tough 1978

After a decade, Allen Tough (1978) looked back at the substantial field of inquiry he had initiated, summarized the research that had been done, and suggested directions for the future. His review included twenty-four studies in addition to his own and noted the broad consistency of findings across time and a variety of populations. Greater differences, he noted, occurred within population groups than across groups.

Reviewing over twenty studies that in essence replicated his research reported in 1971, Tough categorized the populations studied by geographical areas, occupational groups, educational levels, and peer groups and included a single study of older adults (Hiemstra 1975). In summarizing the findings, he noted that probably 90 percent of all adults conduct at least one learning project a year. Typical learners engage in five separate learning projects a year, and spend an average of 100 hours on each project (or a total of 500 hours a year).

In his 1971 book, Tough had reported 98 percent participation; a mean of about eight projects a year with an average of 700 to 800 hours per year. The numbers changed somewhat in the 1978 report, but the similarity of the original survey findings, conducted with only sixty-six interviewees, is remarkably consistent with the composite of findings spanning the decade and several thousand interviews.

Self-planned projects, with the learner assuming major responsibility for selecting the goals and means for learning, were dominant: representing 73 percent of all projects in the 1978 summary as compared with 68 percent in the 1971 report. Other planner comparisons between the 1971 and 1978 reports were: groups, 14 percent to 12 percent; one-to-one helpers, 10 percent to 8 percent; and nonhuman resources, 3 percent in both. Tough further analyzed the planning function and determined that professional planners function in 20 percent of all group learning projects, one-to-one consultations, and in the creation of nonhuman programmed resources. Amateurs—the learner, friends, and peer groups—handle 80 percent of project planning.

Tough, after summarizing the basic surveys reporting on the frequency, duration, and planning of adult learning projects, implied accurately that while most of these studies provided more information on other aspects, they added more to the breadth rather than the depth of understanding adult learning projects. He cited only four studies, including his own work on motivation, that represented more focus on depth and detail. Moorcraft (1975) looked at learning project origins; Morris (1977) studied more specifically the steps in planning; and Luikart (1975) interviewed people who were helpers or resources to self-planning learners.

It becomes apparent that the first decade of this research thrust added little to the conceptual, theoretical, or methodological base set down originally by Tough. The description of adults and their learning projects was expanded, but it was time for new questions to be asked.

Tough suggested that further research investigation be made into major intentional changes in adults' lives (beyond simply learning projects), and into what motivates people to spend 100 hours learning something. He pointed to the need for a better understanding of the function of peer self-help groups, and of the kinds of help or competencies people need for planning and directing their learning. In-depth studies, he said, were needed related to the beginning stages of learning; how human and nonhuman resources affect the process; what happens when learners cannot get the help they need; and what kinds of help would most benefit these learners. Adults want help, Tough believes, and he suggested that adult educators should respond with new and greater resolve "to foster the entire range of major learning efforts, not just group instruction and pre-programmed courses" (1978).

Cross 1981

K. Patricia Cross (1981), acknowledging that research into self-directed learning is more concerned with how adults learn than with descriptions of who the learners are, drew heavily on the summaries of Tough (1978), Coolican (1974), and the only national study conducted to date (Penland 1977). She devoted considerable attention to interpretation of the similarities and differences across the studies.

Noting that Penland (1979) reported somewhat different percentages of types of planners for learning projects, Cross suggested that discrepancies were most likely due to differing definitions of various learning resources. As an example, she cited the question of whether a how-to book is a nonhuman planner or simply a general resource. Tough says it depends on how slavishly the learner follows the book, while Penland is not explicit about the issue.

Adults differ considerably in their reasons for choosing to direct their own learning projects, and express a variety of both positive and negative attitudes toward organized group (class) activities. Cross reasoned that adults who have had more successful experiences in school exhibit less negative feelings toward classes than those who are less educated or who have been less successful in the traditional system.

Learning projects originate with a problem, and adults seek what they believe to be the most efficient means for solving that problem. Although several studies have identified general steps for the planning of projects, the variations among individuals are extreme.

Self-directed learning does not imply isolated learning; in fact, it tends to involve more interpersonal contact than is the case with classroom education. The major problem seems to be finding the appropriate assistance or resource when barriers occur in the process. Cross quoted Tough's (1978, p. 15) assertion that adults want "help with planning and guiding their learning projects." She pointed to a need for detailed case studies to discover the reasons for learner dissatisfaction with the resources they use, the problems they encounter, and their perceptions of what kinds of assistance would be most useful.

Returning to Tough (1971), Cross summarized his findings that nonhuman planners are reported as most efficient in providing the greatest amount of learning in the shortest amount of time. However, learners are least enthusiastic about the knowledge acquired in that mode. On the other hand, they are most enthusiastic about one-to-one learning followed by self-planned projects. They are equally satisfied with the knowledge or skill learned in the projects. If mixed planners are eliminated from the analysis, substantially more time is devoted to self-planned projects than to any of the other major modes. Cross suggested that the size of Tough's sample raises doubts as to its validity. She urged that further studies be carried out, which would be of significance to the field if they could statistically confirm Tough's findings.

Impressed with the amount of information researchers have generated about self-directed learning in a relatively short time, Cross found that more questions have been generated than answered. She states that information about what actually happens during the course of a learning project is generally unknown. "Whether one wants to know how to facilitate learning or how to present information to adults, more in-depth study of how learning actually takes place in everyday settings is a necessity, one that should receive first priority in the 1980's" (Cross 1981, p. 199).

Current Research and Trends

As interest in self-directed learning moves into its second decade, its character and the focus of research have changed, moving beyond the level and parameters established by Tough. Few questions remain unanswered concerning the extent, frequency, planning, and content of self-directed learning projects. Further replications are likely to add little to the base of information at hand.

New areas of interest have emerged, however, and focus on such questions or issues as (1) What are the personal characteristics that facilitate self-directed learning? and (2) Can skills that improve the ability to become a successful self-directed learner be taught or improved? Also, efforts are being made to develop and test new methodology, and at least one significant development in formulating a theory of self-directed learning has been presented.

Characteristics that Facilitate Self-Directed Learning

Lucy M. Guglielmino (1977) has gone further than other investigators in identifying and assessing those characteristics that facilitate self-directed learning by adults. Her 1977 dissertation produced the Self-Directed Learning Readiness Scale (SDLRS), a self-report instrument of fifty-eight items using a Likert-type scale, which can be used to identify the often

latent potential of individuals to assume responsibility for their own learning. She used a three-round Delphi survey with fourteen selected authorities on self-directed learning in determining the items included in the SDLRS, and the instrument was tested with 307 subjects. She reported an estimated reliability of .87.

Guglielmino suggested that eight major factors contribute to an individual's readiness for self-directed learning:

1. Openness to learning opportunities
2. Self-concept as an effective learner
3. Initiative and independence in learning
4. Informed acceptance of responsibility
5. Love of learning
6. Creativity
7. Future orientation
8. Ability to use basic study and problem-solving skills

Torrance and Mourad (1978) tested the SDLRS for construct validity with eight criterion measures dealing with originality, ability to produce analogies, creative achievements and experiences, and right and left hemisphere styles of learning.

The sample consisted of forty-one graduate students and the results seemed to validate the Self-Directed Learning Readiness Scale. Mourad (1979), Skaggs (1981), and others have used the SDLRS in their dissertation research; and numerous studies and applications are underway with populations of gifted elementary and secondary school children, undergraduate and graduate students, nurses, business corporations, members of a labor union, and general adult groups.

Guglielmino and her husband, Paul J. Guglielmino, are currently tying self-directed learning readiness to the skills required increasingly for effective management in business and industry in the future. Quoted in the "Training Today" column of *Training* (Zemke 1980), Paul Guglielmino stated that traditional education decreases the desire to learn and leads people to under-value independent learning and overvalue authority. According to Guglielmino, "strong data suggest that the more schooling a person has, the less likely he is to engage in self-directed learning," (Ibid., p. 6). Given its implications, that statement alone should trigger some interesting research.

Improving Skills for Self-Directed Learning

As early as 1971, Ford initiated an effort to describe the skills and abilities needed to begin what she called independent study, but which equates with the current definition of self-directed learning. Drawing concepts from education, psychology, business literature, and library science, Ford proposed a framework for preparing adults for lifelong learning. Her framework was as follows:

I. Knowledge of social barriers to learning

These include dependency on a teacher, a weak concept of social mindedness, and values which inhibit social responsibility.

II. Skills

Included are reading, writing, listening, reflective thinking, time management, and self-motivation

III. Knowledge of community (societal) resources

Reisser (1973) proposed a model, based on questioning, examining, and reporting, that adult educators might follow to facilitate the self-directed learning process. She suggested the facilitator should help the learner to (1) identify or locate the starting point for a learning project, (2) discern relevant modes of examination and reporting, and (3) conduct self-assessments regarding achievement without a requirement for objective testing.

The linking of learners with resources was a critical need identified by Cross (1978) in order to improve the efficiency and effectiveness of self-directed learning. Noting that many adults have only limited access to major resource bases, Cross argued that educationally underserved populations need advocates to facilitate their access to resources. A second linkage would be that of providing information about available resources to learners and helping individuals to assess their own strengths and weaknesses. Finally, Cross said, the process requires counseling and referral services to help learners plan their projects and to match their needs with appropriate resources.

Moving from conceptualizations to operation or intervention is a continuing problem in most areas of research, and the belief that the process of self-direction in learning can be improved or taught has neither been tested nor confirmed conclusively. However, Kasworm's study (1982) has produced some promising results and may generate further experimentation and research in this area.

Kasworm studied thirty-six graduate students enrolled in two courses designed to examine the development of cognitive and affective competencies in self-directed learning along with experiential instructional strategies. The format followed Knowles' model and learning contract for self-directed learning (1977). Participants were given pre- and posttests with the Self-Directed Learning Readiness Scale (Guglielmino 1977). Two students and the facilitator in each class kept observational diaries, and a final self-assessment by all students gathered perceptual information on both the process and the outcomes.

Significant positive gains in the self-directed learning behavior of the student in both classes resulted from a t-test analysis. Content analyses of the observational diaries and the students' final self-assessments showed a positive trend in the development of self-directed knowledge and skills.

Kasworm acknowledged the lack of a control group and the volunteer character of the sample population as severely limiting factors. In spite of these weaknesses, she argued that the evidence demonstrates that changes of attitude and action in "learning how to learn" did occur and further research, including control and validation measures, should be conducted. She believed that curricular or instructional designs that facilitate and model self-directed learning foster the perceptions and behavior associated with learner independence.

New and Emerging Foci and Methodology

The lack of case studies and in-depth knowledge of the self-directed learning process, deplored by Cross (1981), has drawn the attention of other researchers as well. Recent studies reflect changes in focus, the development of conceptual frameworks, and in approach or methodology.

Tough (1978), noting that his 1971 conceptual framework related to motivation had not been tested, conducted an empirical study (Tough, Abbey, and Orton 1980) of the linking of anticipated benefits with learning. This approach assumes that learners are not singularly motivated but instead anticipate multiple or chains of benefits from their learning projects.

The instrument for gathering the data was a modified version of the original framework (Tough 1971, p. 47) and presents five areas from which benefits may be derived: (1) engaging in learning activities, (2) retention of knowledge or skill gained, (3) use or application of the knowledge or skill, (4) material rewards, and (5) credit or certificate. The source of benefit in each area may be a feeling of pleasure or a sense of self-esteem, or may be found in the regard of others for the individual.

One hundred participants were asked to distribute a total of ten points among the possible benefit categories (fourteen in all) that best represented their several motivational factors.

Interpreting their data, Tough, Abbey, and Orton stated that motivation is clearly complex and usually multiple benefits are anticipated. (Only four of the one hundred people studied reported expecting only a single benefit.) Most people expect to receive pleasure (50 percent) from their learning, while only nine percent are engaged in pleasing or impressing others. Consistent with findings in most early studies is the fact that the expected use or application of the knowledge or skills is the dominant reason for learning. (Ninety-eight of the one hundred subjects included application as a benefit.)

The researchers concluded that this conceptual framework is a useful data-collecting instrument and that learners can identify and differentiate between various motivational factors. They also suggested that other researchers may contribute to the refinement of the framework.

Another change in methodology and in the type of individuals studied was made by Brookfield (1981) in England. Brookfield investigated qualitative aspects of long-term learning projects rather than quantitative elements of short-term projects. The learning projects he studied had to be measured in years rather than hours as used by researchers adopting the early Tough approach.

To obtain the data, he interviewed twenty-five adults who were required to meet two criteria. First, each adult needed a high level of expertise in one specific area—expertise that had gained the person both local and national recognition. Second, the learner needed to have acquired the knowledge through means other than formal learning. Chess, rabbit breeding, and collecting antique china are examples of the types of content learned by the subjects in Brookfield's study.

His approach to data collection was a semistructured interview that Brookfield claimed was a modification of Mezirow's synchronic induction method. Brookfield said he more nearly approximated Houle's (1961) methods than he did Tough's methods.

Among the findings, he identified three characteristic attitudes towards learning that all of his subjects exhibited:

1. Learning was gradual, and done in a field that seemed to have no end.

2. The learners were aware of their interest.

3. The subjects had the feeling they belonged to a society of learning.

Use of Qualitative Research Methods

An emerging interest in qualitative research methods, suddenly evident during the late 1970s in meetings of adult educators, has accompanied a new and more sophisticated approach to the study of adult self-directed learning.

Variously called naturalistic inquiry (Leean and Sisco 1981), humanistic inquiry (Peters, Johnson, and Lazzara 1981) or qualitative research (Spear and Mocker 1981), the approach begins as exploration and interpretation rather than hypothesis testing. The data are natural expressions of individuals in their environment, which, in turn, give meaning to their experiences. The process is inductive, moving from specific cases to generalizations, and those generalizations are supposed to be representative of the real world. This is in contrast to the frequently followed approach that begins with generalizations and then searches the real world for confirming evidence.

An eighteen-month, National Institute of Education (NIE)-funded study of undereducated adults in rural Vermont (Leean and Sisco 1981) included both a Tough-like survey of ninety-three subjects, and in-depth case studies of a fourteen person subsample. Subjects were rural adults with less than a twelve-year education, and the study focused on their learning in out-of-school settings.

The case study phase was of six-months duration, with interviewers spending about fifteen hours with each subject. For this phase the researchers developed and tested a new methodological approach to the study of self-directed learning. Seven distinct exercises, as opposed to a general interview schedule, were conducted in order to gather specific information in the several areas that represent a model based on Lewin's Field Theory (1951). The exercises were titled respectively Milestone, Coping with Conflict, Learning Style, Cognitive Profile, Modes of Thinking, Futures Perspective, and Self-to-Self. Together the researchers and subjects probed the development of learning style, examined self-planned learning and thinking style, and sought to discover individual projections of learning interest and goals. A review of the methodological findings can be found in the 1981 AERC Conference Proceedings (Leean and Sisco 1981, pp. 282-283).

While the first phase, Tough-like study tended to confirm earlier research, the case study approach introduced several new and interesting findings (Leean 1981). The importance of past experiences and family background was found to be significant in the content and motivation for learning as well as in approaches to learning and problem solving. Self-directed learning may be guided by a rational problem-solving mode, but most of the subjects were aware of times when problems were solved through a nonrational or altered state of consciousness.

Visualizing the outcome of a learning goal was a way most subjects began their learning projects, and thinking and problem solving occurred most often when people were alone and doing routine tasks.

Access to information and resources, considered by most researchers to be a major problem for self-directed learners, was not considered as such by the subjects in the case studies. Husbands' attitudes and a lack of mobility were problems for women interested in learning and growing. They tended to have multiple interests while men tended to focus on improving or maintaining current skills and interests.

In discussion, Leean (1981) suggested that in both basic skills and postsecondary education, educators should begin with "assumptions of competence rather than deficiency." The adults have experience and skills in processing information, selecting resources, problem solving, and guiding their own learning.

In a second study, funded by NIE, Peters, Johnson, and Lazzara (1981) conducted interviews with ninety literate and ninety illiterate adults in Tennessee. They collected data on individuals who were solving real life problems. The researchers began with the assumption that most adults' learning projects are actually efforts to resolve some problem. Specifically, they state that "learning is the result of a problem-solving process." Similarity to the Vermont Study (Leean 1981) is noted here.

Although the findings from this two-year project have not been released, the researchers described a somewhat sophisticated conceptual, methodological framework within which the data were collected and the analyses conducted (Peters, Johnson, and Lazzara 1981). They pointed out two trends in research on problem solving and reasoning: (1) much of human behavior is determined by individuals' environments or the uniqueness of the circumstances surrounding them, and (2) people's knowledge of the world around them governs what they do.

Peters, Johnson, and Lazzara reported drawing on Hudson for the hermeneutic approach that suggests that investigations ought to be interpretive at the outset rather than beginning with hypotheses. This approach encourages the use of all available information and reflects the subjects' perceptions and knowledge of real world circumstance. Peters, Johnson, and Lazzara (1981) quoted Niesser in describing their research as "ecologically valid."

During the first year of the two-year study, the interviewers conducted an initial interview and up to five follow-up sessions. (The number of follow-up sessions continued until the subject had solved his/her problem.) Semistructured and open-ended interview schedules were used to gather information on the definition of the problem, steps taken to solve the problem, and the reasoning behind the steps that were taken.

If successful, the process for analyzing the data gathered in the first year will represent an impressive step forward in adult education research. The method devised by the researchers is called "reduction," which is four-stage textual analysis. The total process is referred to as ACTS: atomizing, categorizing, thematizing, and schematizing (Peters, Johnson, and Lazzara 1981).

The process relies heavily on a computer data base that stores transcripts of the interviews and permits easy manipulation of the data. The ACTS analysis begins by eliminating redundant and irrelevant information and identifying individual sentence paraphrases that contain intended ideas. These are called atoms. Categorizing is a process of putting each atom into one of six categories. The categories are *law*, *norm*, *intention*, *want*, *belief*, and *fact*. Thematizing seeks to link logical connections or relationships among the atoms within each category. The final stage, schematizing, is a formulation in the form of a flow chart, which is a model of the individual when engaged in solving a problem, or "a depiction of the person's reasoning pattern applied to a specific problem situation" (Peters, Johnson, and Lazzara 1981).

The researchers see this ACTS analysis as providing the means for highly controlled research on problem solving and learning in the future. They expect to be able to deal statistically with the relationship between the problem-solving process and the individual's level of various competencies. Also, it should be possible to develop computer simulation of problem solving/learning episodes and to manipulate the elements to produce varied and predictable results.

Both the Lesan and Sisco (1981) and Peters, Johnson, and Lazzara (1981) studies represent dramatic conceptual developments beyond the basic survey approaches to the study of adult learning projects of the previous decade. These efforts have obvious potential for application to instructional improvement and, therefore, hold significance for practitioners. However, the most exciting promise is the contribution that may be made toward developing a more coherent and generalizable theory of adult learning. Most academic and professional members in adult education are concerned with and self-conscious about this fundamental weakness in the field. With increased knowledge about how adults learn, the gap may be narrowed or closed during the 1980s.

A fresh look at the planning process in self-directed learning has been presented by Spear and Mocker (1981). They suggested that the learner's environment is the major determinant in organizing a learning project.

Their research is the result of a secondary analysis of the qualitative data collected in a national study funded by NIE in a contract with Kirschner Associates, Inc., and a subcontract with the Center for Resource Development in Adult Education, School of Education, University of Missouri-Kansas City. The study reviewed here followed, but was not a part of, that earlier project.

Drawing on idiographic data collected in eighty interviews with self-directed learners across the United States, this study established the importance of environmental factors in the planning and conducting of self-directed learning projects. The findings are congruent with the theorizing of Kurt Lewin (1951) that an understanding of human behavior should be grounded in the study of the individual's life space.

The concept of the "Organizing Circumstance" is introduced as defining those elements in the adult's life space that provide motivation, resources, activities, and overall direction to the planning and conduct of a learning project. The four modal types of Organizing Circumstances are identified as (1) Single Event/Anticipated Learning, (2) Single Event/Unanticipated Learning, (3) Series of Events/Related Learning, and (4) Series of Events/Unrelated Learning. This typology emerged by content analysis from learners' descriptions of their learning activities, and the researchers provide examples for each type. Attention is also directed to the fact that observable learning behaviors that appear to be similar may represent totally different meanings given the circumstances of the respective individuals.

The researchers suggested that most of the Tough-like basic surveys assumed or tried to equate the self-planned learning process with the process employed traditionally in planning or organizing formal education. They reasoned that this is a basic error, since the planning of formal education activities is in the hands of a person who already has command of the subject matter. The reverse is the case with self-planned learning. Assumptions of similarity between the two processes have led to faulty understanding of the planning process for self-directed learning.

The impetus for the secondary analysis grew from the earlier data gathering phase of the project in which almost no evidence of preplanning was reported by the subjects. This absence

of conscious planning prompted the researchers to reanalyze the data in an effort to identify the forces that contribute to initiation and maintenance of self-directed learning projects.

In recommending future research, Spear and Mocker (1981) suggested that the concept of the Organizing Circumstance be tested with more broadly based populations, and that behavioral and perceptual studies of adult learners take into account the impact of environment or circumstances upon the data collected.

The three studies that have been mentioned (Leean 1981; Peters, Johnson, and Lazzara 1981; Spear and Mocker 1981) demonstrate two trends that seem likely to be of major significance to research in the 1980s. First, there is strong and growing interest in naturalistic inquiry and qualitative analysis of the self-directed learning process. Second, there is a recognition of the need to understand or interpret adult learning in relation to the environment or life space of the learner.

Theory-Building in Self-Directed Learning Research

Adult educators have a history of chiding themselves for their lack of attention to theory-building in the field. The authenticity of adult education itself as an academic field has been questioned by outside examiners who point not only to lack of a theoretical base, but to the few adult educators who seem concerned with this shortcoming. The new wave of emerging research has begun to show promise for contributing to a theory base related to self-directed learning and Penland (1981) has made a frontal effort to place self-directed learning within a broad theory of learning.

Penland (1981) combined neo-behaviorism with social learning theory to establish a theoretical framework for learning research in the immediate future. Neo-behaviorism, according to Penland, can accept unobservable elements or links between variables and is not bound by only those variables that can be observed and measured in a traditional sense: a characteristic of classical behaviorism. Nonverbal communication measures and observations, as well as the analysis of discourse (verbal) units have much to contribute to these newer approaches.

The concept of social learning as set forth by Bandura (1977) suggests that much of human learning is achieved through observing other people performing roles or skills, or from reading or seeing pictures of the skilled behavior of others. Penland (1981) suggested that observational learning is "even more prevalent than self-directed learning," and adds learning-by-modeling to learning-by-doing. Four elements comprise observational learning:

> *Attentional processes* on the part of the subject towards the person being observed as a model.
>
> *Retention processes* become integrated into memory by the associated impact of imaginal and verbal coding.
>
> *Motoric reproduction* skills require many small components even though communicated by observation, "cognitive rehearsal" or "imaginary practice."
>
> *Reinforcement* occurs in anticipation of vicariously experienced treatments, rewards and conditioning. (Penland 1981, p. 7)

In espousing neo-behaviorism, Penland believed that it permits the development of new taxonomies based on the observed verbal and nonverbal patterns of adults as they are engaged in learning. He saw these replacing traditional taxonomies derived from the way teachers teach rather than the way people learn (Ibid., p. 8).

Penland (1981) noted that self-directed learning is generated in and by the environment of the learner's daily life, and that learning projects have a time line associated with their tenure. Spear and Mocker (1981) came to the same conclusion empirically in an independent study using different methods and design. Self-directed learning occurs when the individual assumes responsibility for setting goals, time and place scheduling, human and nonhuman resources, and the methods for instruction. Penland pointed out that self-instruction has no interpersonal authority relationships. The learner is the authority, and shapes the outcomes by the amount of attention certain components are given. Learning may be pursued inductively or deductively, beginning either with isolated information that triggers additional data gathering, or starting with a group of data that invites a unifying concept or framework.

> The environment may be the curriculum for self-directed learning; but the learner is neither at the mercy of, nor constrained by that environment. The learner uses the transactions and negotiations of everyday life for self-instructional development, and a full range of teaching and learning devices are encountered in the process. The facts of learning and self-instruction cannot be accounted for by any single theory or school of psychology, but would require the power of them all integrated at some future point in a grand synthesis. (Penland 1981, p. 37)

Penland (1981) has initiated a first major effort to draw together in a single document the theoretical bases that have relevance to adult education and self-directed learning in particular. His work encompasses learning theory, the descriptive data base on self-directed learning, motivational and instructional theory, the process of self-instruction, and application to practice. His efforts are a major contribution to future researchers who may use his framework as a means for placing their own work in context and in relation to the total spectrum of research interests.

Discussion

The interest of adult educators in self-directed learning breaks away from the long-time preoccupation with those factors that contribute to the participation of adults in institutionally organized learning activities. It is not an overstatement to suggest that all too often, the organizing and conducting of programs have become ends in themselves for many practitioners. A new level of respect for the ability of adults to take responsibility and to succeed at achieving learning goals is explicit, building upon the foundation laid by Houle (1961) and going beyond Knowles' (1971) andragogical model that was dominant in the 1970s. That model was based on anticipation of direct intervention by the adult educator.

If there is a central feature to the new wave of research, it is the recognition of the power and importance of the environment in influencing self-directed learning. The basic theoretical formulations of Kurt Lewin in the 1940s are reference points again and again (Leean 1981; Peters, Johnson, and Lazzara 1981; Spear and Mocker 1981; and Penland 1981). Lewin placed the individual's life space at the center of understanding human behavior, and in so doing, offered the most logical base for studying the behavior of self-directed learning. In contrast to the artificial environment constructed for institutionally organized learning, self-directed learning takes place in natural everyday settings. Further, it is the individual's perceptions of and interaction with that environment which give meaning to information and experience. This, too, is

in contrast with formal learning, where interpretation and measurement are the prerogatives of authorities.

Still obscure and troublesome is the question of how the professional adult educator can find an effective role in a world devoted to self-directed learning. Several writers seem assured that self-directed learners want and need help, and that adult educators shall become consultants, referral and resource persons, and producers of learning materials. However, the evidence suggests that self-directed learners do not seek professional assistance frequently nor do they seem to require it in most cases in order to achieve their learning goals. This is not to say that the time-honored task of organizing special classes for adults is likely to disappear. What does appear necessary is a serious reappraisal of the role of professional adult educators, and an understanding that the emerging social legitimacy of self-directed learning calls for more than cursory and obvious considerations.

SUMMARY

In order to clarify the concept of lifelong learning, a model has been provided. Since control is a key characteristic of adulthood, the model is constructed on the idea that an operational definition of lifelong learning should be based on the locus of control for making decisions about the goals and means of learning. The model, a two-by-two matrix of learners and institutions, represents four types of learning, as follow:

- Formal—learners have little control over the objectives and means of learning;
- Nonformal—learners control the objectives but not the means of learning;
- Informal—learners control the means but not the objectives of learning;
- Self-Directed—learners control both the objectives and the means of learning.

The model demonstrates how all planned or deliberate learning is located along a continuum, with the concept of control providing the basis for classifying the types of lifelong learning.

The model is clarified and expanded by examining the research on formal, nonformal, informal, and self-directed learning. Because research suggests that approximately 70 percent of all adult learning can be categorized as self-directed, self-directed learning is given an in-depth examination. The following findings result from the application of the classification system to reports and research:

- Programs or systems are frequently mislabled, that is, they may be called nonformal or self-directed when, according to the model described in the paper, they are actually formal or informal.
- In the literature the use of the term "education" usually carries an institutional or system connotation, whereas the term "learning" connotes behavior of the individual. Learning seems to focus on the person while education focuses on the system.
- Examples of research and programs related to the model's definition of nonformal learning are limited in North America and almost nonexistent in the rest of the world.
- Use of nontraditional settings and content (means and goals) in programs does not necessarily imply learner control.
- A central feature of the new wave of research in self-directed learning is the recognition of the power and importance of the environment in influencing learning.
- Still obscure and troublesome is the question of how the professional adult educator can find an effective role in a world devoted to self-directed learning.

By examining the relationship of formal, nonformal, informal, and self-directed learning to lifelong learning, the monograph defines the major elements of the lifelong learning phenomenon and the relationship between and among those elements. Thus, it is an initial step in theory-building, one that will lead to further clarity of the concept of lifelong learning.

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